Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5 (cancelled)

Claim 6 (currently amended): A cell culture comprising:

a human neural precursor cell line, said cell line comprising cells containing a recombinant DNA construct comprising a nuclear receptor ligand-regulated *c-myc* gene, wherein said ~~cell line~~cells ~~resists~~ resist differentiation beyond thirty cell doublings in media containing a mitogen and wherein said cells ~~is capable of differentiating~~differentiate into neurons upon withdrawal of mitogen.

Claims 7-22 (canceled)

Claim 23 (currently amended): A cell culture comprising:

~~mammalian~~ human neural precursor cells capable of differentiating into neurons and glia,

wherein the ~~mammalian~~ neural precursor cells comprise a recombinant DNA construct comprising a nuclear receptor ligand-regulated *c-myc* gene, and

wherein said neural precursor cells resist differentiation during expansion of said cells beyond thirty cell doublings in media containing a mitogen and an amount of nuclear receptor ligand sufficient to maintain a stable cell line, and wherein at least 20% of said neural precursor cells are capable of differentiating into neurons upon withdrawal of said mitogen and said nuclear receptor ligand.

Claim 24 (canceled)

Claim 25 (previously presented): The cell culture of claim 23, wherein the mammalian neural precursor cells are derived from pluripotent embryonic stem cells.

Claim 26-30 (canceled)

Claim 31 (currently amended): A cell culture comprising a cell line of ~~mammalian~~ human neural precursor cells, produced by the steps comprising:

(a) culturing the neural precursor cells in a serum-free medium and in the presence of a first mitogen, wherein said first mitogen is selected from the group consisting of aFGF, bFGF, EGF, TGFα and combinations thereof;

(b) introducing a *c-myc* construct into the cells, wherein the *c-myc* construct includes a *c-myc* DNA fused with DNA encoding a ligand binding domain of a nuclear receptor; and

(c) further culturing the cells beyond thirty cell doublings in a medium containing the first mitogen and a second mitogen and an amount of nuclear receptor ligand sufficient to maintain a stable cell line,

wherein said second mitogen is selected from the group consisting of aFGF, bFGF, EGF, TGFα, serum and combinations thereof,

wherein said medium containing the first mitogen and the second mitogen further comprises a *c-myc*-activating agent capable of binding to the ligand-binding domain of said nuclear receptor~~, and~~;

~~wherein the neural precursor cells resist differentiation in media containing a mitogen~~.

Claim 32 (canceled)

Claim 33 (previously presented): The cell culture of claim 31, wherein the mammalian neural precursor cells are derived from pluripotent embryonic stem cells.

Claim 34 (previously presented): The cell culture of claim 31, wherein the cells maintain a multipotential capacity to differentiate into neurons and glia.

Claim 35 (previously presented): The cell culture of claim 31, wherein the cells maintain a bipotential capacity to differentiate into neurons and astrocytes.

Claim 36 - 38 (canceled)

Claim 39 (currently amended): The cell culture of Claim 31, wherein the culture includes a ~~monolayer~~ feeder cell component.

Claim 40 (previously presented): The cell culture of claim 31, wherein the second mitogen is different from the first mitogen.

Claim 41 (previously presented): The cell culture of claim 31, wherein the neural precursor cells are derived from central nervous system tissue.

Claim 42 (previously presented): The cell culture of claim 41, wherein the central nervous system tissue is selected from the group consisting of hippocampus, cerebral cortex, striatum, septum, hindbrain, and spinal cord

Claim 43 (previously presented): The cell culture of claim 31, wherein the nuclear receptor is selected from the group of receptors consisting of an estrogen receptor, an androgen receptor, a progesterone receptor, a glucocorticoid receptor, a thyroid hormone receptor, a retinoid receptor, and an ecdysone receptor

Claim 44 (currently amended): The cell culture of Claim 6, wherein the human neural precursor cell line~~which includes~~ is a clonal cell line.

Claim 45 (canceled)

Claim 46 (currently amended): The cell culture of Claim 23, wherein said neural precursor cells ~~which includes~~are cells of a clonal cell line.

Claims 47-48 (canceled)

Claim 49 (previously presented): The cell culture of Claim 48, wherein the nuclear receptor is selected from the group consisting of an estrogen receptor, an androgen receptor, a progesterone receptor, a glucocorticoid receptor, a thyroid hormone receptor, a retinoid receptor, and an ecdysone receptor

Claim 50 (previously presented): The cell culture of claim 23, wherein the neural precursor cells are derived from central nervous system tissue selected from the group consisting of hippocampus, cerebral cortex, striatum, septum, hindbrain, and spinal cord.

Claim 51 (currently amended): A method for increasing the proportion of neurons in ~~producing~~ a culture ~~comprising a~~ of ~~mammalian~~ human neural precursor cells ~~cell line wherein a portion of the cell line is~~ capable of differentiating into neurons and glia~~,~~ comprising:

a) ~~preparing a culture comprising~~ culturing at least one neural precursor cell in a medium including a first mitogen selected from the group consisting of aFGF, bFGF, EGF, TGFα and combinations thereof;

b) introducing into the neural precursor cell in the medium including the first mitogen a recombinant DNA construct comprising a receptor ligand-regulated *c-myc* gene, wherein the *c-myc* DNA is fused with DNA encoding a ligand-binding domain of a nuclear receptor; ~~and~~

c) expanding the neural precursor cell including the *c-myc* construct beyond thirty cell doublings prior to differentiation of said cell, wherein said expansion occurs in a medium containing the first mitogen and a second mitogen ~~into a cell line that resists differentiation in media containing a mitogen~~,

wherein said second mitogen is selected from the group consisting of aFGF, bFGF, EGF, TGFα, serum and combinations thereof, and

wherein said medium ~~containing~~ comprising the first mitogen and the second mitogen further comprises ~~a~~ an amount of a *c-myc*-activating agent sufficient to maintain a stable cell line, wherein said *c-myc*-activating agent is capable of binding to the ligand-binding domain of said nuclear receptor; and

d) withdrawing said mitogen and said c-myc-activating agent to initiate differentiation of said neural precursor cell into a neuron.

Claim 52-53 (canceled)

Claim 54 (previously presented): The method of claim 51, wherein the neural precursor cell is derived from pluripotent embryonic stem cells.

Claim 55 (previously presented): The method of claim 51, wherein the neural precursor cell is derived from central nervous system tissue.

Claim 56 (previously presented): The method of claim 51, wherein the central nervous system tissue is selected from the group consisting of hippocampus, cerebral cortex, striatum, septum, hindbrain, and spinal cord.

Claim 57 (canceled):

Claim 58 (previously presented): The method of claim 51, wherein the second mitogen is different from the first mitogen.

Claim 59 (previously presented): The method of claim 51, wherein the nuclear receptor is selected from the group consisting of an estrogen receptor, an androgen receptor, a progesterone receptor, a glucocorticoid receptor, a thyroid hormone receptor, a retinoid receptor, and an ecdysone receptor.

Claim 60 (previously presented): The method of claim 51, wherein the *c-myc*-activating agent is selected from the group consisting of β-estradiol, RU38486, dexamethasone, thyroid hormones, retinoids, and ecdysone.

Claim 61 (previously presented): The method of Claim 51, further comprising introducing a selectable marker into the neural precursor cell.

Claim 62 (previously presented): The method of Claim 51, further comprising culturing the neural precursor cell in the presence of feeder cells.

Claim 63 (previously presented): The method of Claim 62, wherein the feeder cells are selected from the group consisting of unmodified primary stem cells, immature glial cells, mature astrocytes, fibroblasts, neurons and mitotically-inhibited cells.

Claim 64 (currently amended): A method of ~~obtaining a culture comprising~~ amaintaining the capacity of neural precursor cell ~~line~~ lines of a ~~mammal~~human ~~capable of expanding through at least thirty cell doublings and wherein a portion of the cell line is capable of~~ to ~~differentiating~~ differentiate into neurons *in vitro*, wherein said neural precursor cells are capable of differentiating into neurons and glia, said method comprising:

a) preparing a culture comprising at least one cell of said neural precursor cell line, wherein said culture includes ~~a first~~ at least one mitogen selected from the group consisting of aFGF, bFGF, EGF, TGFα and combinations thereof;

b) modifying said neural precursor cell to express a chimeric *c-myc* protein comprising a *c-myc* protein fused with at least one nuclear receptor protein ~~such that the modified cell resists differentiation in a medium containing a mitogen~~ having a *c-myc*-activating ligand binding domain; ~~and~~

c) ~~culturing~~ expanding the undifferentiated modified neural precursor ~~cells~~ cell beyond thirty cell doublings in a medium comprising ~~the first~~ said mitogen and ~~a~~ an amount of a ~~myec~~*c-myc*-activating agent sufficient to maintain a stable cell wherein said cell resists differentiation in the presence of mitogen; and

d) withdrawing said mitogen and said c-myc-activating agent to initiate differentiation.

Claim 65 (canceled)

Claim 66 (previously presented): The method of claim 64, wherein the neural precursor cell is derived from central nervous system tissue.

Claim 67 (previously presented): The method of claim 66, wherein the central nervous system tissue is selected from the group consisting of hippocampus, cerebral cortex, striatum, septum, hindbrain, and spinal cord.

Claim 68 (canceled)

Claim 69 (previously presented): The method of Claim 64, wherein the nuclear receptor protein is selected from the group consisting of an estrogen receptor, an androgen receptor, a progesterone receptor, a glucocorticoid receptor, a thyroid hormone receptor, a retinoid receptor, and an ecdysone receptor

Claim 70 (previously presented): The method of Claim 64, wherein the c-myc-activating agent is selected from the group consisting of β-estradiol, RU38486, dexamethasone, thyroid hormones, retinoids, and ecdysone.

Claims 71 – 80 (canceled)

Claim 81 (new): The method of Claim 51, wherein the neural precursor cell is a cell of a clonal cell line.

Claim 82 (new): The method of Claim 64, wherein said neural precursor cell line is a clonal cell line.